

PATENT COOPERATION TREATY

PCT

INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference CD-103 - PCT	FOR FURTHER ACTION <small>see Form PCT/ISA/220 as well as, where applicable, item 5 below.</small>	
International application No. PCT/EP2004/052035	International filing date (day/month/year) 03/09/2004	(Earliest) Priority Date (day/month/year) 05/09/2003
Applicant CROPDESIGN N.V.		

This International Search Report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This International Search Report consists of a total of 7 sheets.

☐ It is also accompanied by a copy of each prior art document cited in this report.

1. Basis of the report

a. With regard to the **language**, the international search was carried out on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.

☐ The international search was carried out on the basis of a translation of the international application furnished to this Authority (Rule 23.1(b)).

b. ☒ With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, see Box No. I.

2. ☐ **Certain claims were found unsearchable** (See Box II).

3. ☒ **Unity of invention is lacking** (see Box III).

4. With regard to the title,

☒ the text is approved as submitted by the applicant.

☐ the text has been established by this Authority to read as follows:

5. With regard to the abstract,

☒ the text is approved as submitted by the applicant.

☐ the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box No. IV. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

6. With regard to the drawings,

a. the figure of the drawings to be published with the abstract is Figure No. Fig. 1

☐ as suggested by the applicant.

☒ as selected by this Authority, because the applicant failed to suggest a figure.

☐ as selected by this Authority, because this figure better characterizes the invention.

b. ☐ none of the figures is to be published with the abstract.

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International application No.

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Box No. I Nucleotide and/or amino acid sequence(s) (Continuation of item 1.b of the first sheet)

1. With regard to any nucleotide and/or amino acid sequence disclosed in the international application and necessary to the claimed invention, the international search was carried out on the basis of:
- a. type of material
- ☒ a sequence listing
- ☒ table(s) related to the sequence listing
- b. format of material
- ☒ in written format
- ☒ in computer readable form
- c. time of filing/furnishing
- ☒ contained in the international application as filed
- ☒ filed together with the international application in computer readable form
- ☐ furnished subsequently to this Authority for the purpose of search
2. ☐ In addition, in the case that more than one version or copy of a sequence listing and/or table relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.
3. Additional comments:

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International Application No

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A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 C12N15/82 C12Q1/48 C12N9/12 A01H5/00

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 C12N C12Q A01H

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, BIOSIS, WPI Data, PAJ, Sequence Search

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 98/41642 A (VLAAMS INTERUNIVERSITAIR INSTITUUT VOOR BIOTECHNOLOGIE; INZE, DIRK; SE) 24 September 1998 (1998-09-24) page 14, last paragraph example 15 claim 16 ----- -/--	1-23



Further documents are listed in the continuation of box C.



Patent family members are listed in annex.

* Special categories of cited documents :

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier document but published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

"&" document member of the same patent family

Date of the actual completion of the international search

4 February 2005

Date of mailing of the international search report

14 -07- 2005

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INTERNATIONAL SEARCH REPORT

International Application No

PCT/EP2004/052035

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	<p>PORCEDDU ANDREA ET AL: "A plant-specific cyclin-dependent kinase is involved in the control of G2/M progression in plants" JOURNAL OF BIOLOGICAL CHEMISTRY, vol. 276, no. 39, 28 September 2001 (2001-09-28), pages 36354-36360, XP002316406 ISSN: 0021-9258 the whole document page 36357 figure 4 figure 5 page 36358, left-hand column, paragraph 1; figure 6 page 36359, left-hand column, paragraph 4 page 36359, right-hand column, last paragraph</p> <p>-----</p>	16-20,23
X	<p>YOSHIZUMI TAKESHI ET AL: "An Arabidopsis cell cycle-dependent kinase-related gene, CDC2b, plays a role in regulating seedling growth in darkness" PLANT CELL, vol. 11, no. 10, October 1999 (1999-10), pages 1883-1895, XP002316407 ISSN: 1040-4651 the whole document figure 2 figure 3 page 1888</p> <p>-----</p>	16-20,23
X	<p>WO 00/56905 A (CROPDESIGN N.V.; DE VEYLDER, LIEVEN; BOUDOLF, VERONIQUE, KATELIJNE, CEC) 28 September 2000 (2000-09-28) claims 5-7 example 7</p> <p>-----</p>	1-23
X	<p>WO 02/16655 A (THE SCRIPPS RESEARCH INSTITUTE; SYNGENTA PARTICIPATIONS AG; HARPER, JE) 28 February 2002 (2002-02-28) the whole document</p> <p>-----</p>	16
X	<p>HASHIMOTO J ET AL: "Isolation and characterization of cDNA clones encoding cdc2 homologues from Oryza sativa: a functional homologue and cognate variants" MOLECULAR AND GENERAL GENETICS, SPRINGER VERLAG, BERLIN, DE, vol. 233, no. 1/2, May 1992 (1992-05), pages 10-16, XP002113196 ISSN: 0026-8925 the whole document</p> <p>-----</p> <p>-/--</p>	16

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	<p>DATABASE EMBL [Online] 9 March 2001 (2001-03-09), "Arabidopsis thaliana mRNA for cyclin dependent kinase (CDKB1;2 gene)" XP002316408 retrieved from EBI accession no. EM PRO:ATH297937 Database accession no. ATH297937 abstract</p>	
A	<p>& DATABASE TREMBL DATABASE [Online] EBI.AC.UK; Putative cell division control CDK 1 May 1999 (1999-05-01), ROUNSLEY, S.D., ET AL.: "Arabidopsis thaliana -Putative cell division control CDK" retrieved from EBI.AC.UK accession no. WWW.EBI.AC.UK Database accession no. Q9ZV14 abstract</p>	
A	<p>----- DATABAS EMBL [Online] 17 July 2001 (2001-07-17), "Arabidopsis thaliana Arath;CDKB2;1 mRNA for cyclin-dependent kinase B2, complete cds." XP002316409 retrieved from EBI accession no. EM PRO:AB047279 Database accession no. AB047279 abstract</p>	
A	<p>----- MIRONOV V ET AL: "Cyclin-dependent kinases and cell division in plants: The Nexus" PLANT CELL, AMERICAN SOCIETY OF PLANT PHYSIOLOGISTS, ROCKVILLE, MD, US, vol. 11, no. 4, April 1999 (1999-04), pages 509-521, XP002234257 ISSN: 1040-4651 table 1</p>	
A	<p>----- IMAJUKU Y ET AL: "EXON-INTRON ORGANIZATION OF THE ARABIDOPSIS-THALIANA PROTEIN KINASE GENES CDC2A AND CDC2B" FEBS LETTERS, vol. 304, no. 1, 1992, pages 73-77, XP002268186 ISSN: 0014-5793 the whole document</p> <p>----- -/--</p>	

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT		
Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	<p>JOUBES J ET AL: "CDK-RELATED PROTEIN KINASES IN PLANTS" PLANT MOLECULAR BIOLOGY, NIJHOFF PUBLISHERS, DORDRECHT, NL, vol. 43, no. 5/6, August 2000 (2000-08), pages 607-620, XP001037063 ISSN: 0167-4412 the whole document figure 2; table 1 page 71, right-hand column, last paragraph - page 72, right-hand column</p> <p>-----</p>	
A	<p>HIRAYAMA T ET AL: "IDENTIFICATION OF TWO CELL-CYCLE-CONTROLLING CDC2 GENE HOMOLOGS IN ARABIDOPSIS-THALIANA" GENE (AMSTERDAM), vol. 105, no. 2, 1991, pages 159-166, XP001042260 ISSN: 0378-1119 the whole document</p> <p>-----</p>	
A	<p>MAGYAR Z ET AL: "Cell cycle phase specificity of putative cyclin-dependent kinase variants in synchronized alfalfa cells" PLANT CELL, AMERICAN SOCIETY OF PLANT PHYSIOLOGISTS, ROCKVILLE, MD, US, vol. 9, no. 9, February 1997 (1997-02), pages 223-235, XP002113325 ISSN: 1040-4651 cited in the application the whole document</p> <p>-----</p>	
P,X	<p>WO 2004/035798 A (CROPDESIGN NV [BE]; INZE DIRK [BE]; DE VEYLDER LIEVEN [BE]; VLIEGHE KO) 29 April 2004 (2004-04-29) claim 2 page 86; table 4</p> <p>-----</p>	1-23

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/EP2004/052035

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
WO 9841642 A	24-09-1998	AU 744834 B2	07-03-2002
		AU 6730198 A	12-10-1998
		CA 2284136 A1	24-09-1998
		WO 9841642 A1	24-09-1998
		EP 0972060 A1	19-01-2000
		JP 2001516217 T	25-09-2001
		US 2003014777 A1	16-01-2003
		US 6465718 B1	15-10-2002
		US 2002138868 A1	26-09-2002
WO 0056905 A	28-09-2000	AU 4396000 A	09-10-2000
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		WO 0056905 A2	28-09-2000
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		CA 2420555 A1	28-02-2002
		EP 1313867 A2	28-05-2003
		WO 0216655 A2	28-02-2002
		US 2002160378 A1	31-10-2002
WO 2004035798 A	29-04-2004	AU 2003298095 A1	04-05-2004
		WO 2004035798 A2	29-04-2004